

CLAIMS

1. Machine for applying a fiberglass reinforcement to disposable
5 formworks for columns, particularly for formworks provided with a tubular body,
preferably made of expanded polystyrene, having a sealing inner coating and an
external coating or reinforcement made of a band of fiberglass mesh rolled up
helicoidally on said tubular body, characterised in that it includes, on an elongated
bench (1), which dimensions are according to the dimensions of the formwork (3),
10 a pair of longitudinal rollers (2) constituting a seat for said formwork (3) and being
conveniently motorized in order to confer a rotational movement to the formwork
(3) with the assistance of upper pressure rollers (12), having also a carriage (14) on
said bench (1), movable in parallel to the rollers (2-12), wearing the fiberglass
mesh delivering reel (13), with the special particularity that said reel (13) is mounted
15 on the carriage (14) having the possibility to rotate around a vertical axis (18) in
order to vary the angle of the continuous band of fiberglass mesh with respect to the
axis of the formwork (3), enabling the helicoidal rolling up in both directions as well
as the rolling up perpendicular to the formwork (3), particularly at the ends of the
same, the reinforcement delivering reel (13) being furthermore assisted by an
20 automatic brake against which the traction rollers (2) are acting, in order to confer
the appropriate tension to the fiberglass mesh during its rolling up on the formwork
(3).

2. Machine for applying a fiberglass reinforcement to disposable
25 formworks for columns, according to claim 1, characterised in that a portal frame is
established on the bench (1), made of a pair of fixed poles (5) on which a bridge
structure (6) is placed, vertically movable along guides (7) by means of a motor (8),
said bridge structure (6) having a plurality of lower arms (10) projecting frontally,
articulated and actuated by their respective pneumatical cylinders (11), having arms
30 (10) supporting at their free ends said pressure rollers (12), by which they acquire
an adjustable height in order to adapt to formworks (3) having different diameters,

and exerting a pressure on the latter thanks to the strain provided by the cylinders (11).

3. Machine for applying a fiberglass reinforcement to disposable
5 formworks for columns, according to any preceding claim, characterised in that a pair of longitudinal guides (15) are placed on the bench (1), in parallel to the traction rollers (2), for the movement of the carriage (14) with the help of a motor (17) acting on a moving chain (16) or on any other appropriate transmission means, having the particularity that another motor (19) is mounted on the same carriage (14)
10 to change the orientation of the reinforcement reel (13) with respect to the formwork (3).

4. Machine for applying a fiberglass reinforcement to disposable
formworks for columns, according to any preceding claim, characterised in that the
15 carriage further comprises a blade (20) for cutting the band of fiberglass mesh constituting the reinforcement, accompanying the correspondent reel (13) in its movements, and being movable along an axis (21) during the cutting operation.

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The Official Agent.

MACHINE FOR APPLYING FIBERGLASS REINFORCEMENTS IN
DISPOSABLE COLUMN FORMS

A pair of rollers (2), constituting the seat and the traction means for the formwork
5 (3) to be reinforced, are established on a bench (1). A pair of upper pressure rollers
(12) act, at the same time, on the formwork. On the same bench (1) there are also
placed, laterally with respect to the formwork (3), a pair of longitudinal guides (15)
for the movement, in parallel to the formwork (3) of a carriage (14) wearing the
fiberglass mesh delivering reel (13), said reel (13) being furthermore mounted on
10 the carriage (14) with the possibility to rotate around the vertical axis, in order to
vary the orientation of the fiberglass mesh with respect to the formwork (3). The
carriage (14), at the end position on the guides (15), delivers the reinforcing band to
the formwork (3) in a perpendicular way with respect to the axis of the latter, and
after turning around the formwork (3) for some times, the carriage initiates the
15 longitudinal movement while the reel (13) adopts an inclined position, until the
opposed end of the formwork (1) is reached, at which moment it reverts to the
perpendicular position and thereafter the direction is changed.